

## **Remarks**

Claims 1-20 and 41-60 remain pending. Claims 1-20 and 41-60 stand rejected. Claims 21-40 have been previously canceled. The Applicant respectfully traverses the rejection and requests allowance of claims 1-20 and 41-60 in light of the following remarks.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1-20 and 41-60 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,104,727 (Moura) in view of U.S. Patent No. 6,940,833 (Jonas). (See pages 2-7 of the Office Action.)

Claim 1 requires, in part, processing the message to determine channel information describing **actual use of each of a plurality of channels** in the broadband wireless system by each of a plurality of users, wherein the channel information describing actual use includes a per-user breakdown of a **time spent in each channel**. In other words, a message is received and processed. The processing determines a per-user breakdown of the actual time spent in each channel of the broadband wireless system. Independent claim 41 includes a similar limitation.

The Office Action correctly notes "Moura doesn't teach specifically, receiving a message; processing the message to determine channel information describing actual use of each of a plurality of channels in the broadband wireless system by each of a plurality of users, wherein the channel information describing actual use includes a per-user breakdown of a time spent in each channel." However, the Office Action goes on to state that Jonas (at column 9, lines 6-39, and column 10, lines 4-17) teaches this claim element. The Applicant respectfully traverses this interpretation of the prior art and the application of this prior art to the present claims.

Jonas discloses a scheduling scheme for a broadband wireless access system. The system of Jonas uses periodic calibration of upstream operational parameters in prioritizing usage of the various channels and times. While the invention of Jonas prioritizes usage of the plurality of channels, it does not track the actual use (in time spent in each channel) by each individual user.

Jonas teaches that each modem is assigned a priority for each channel based on the performance of the modem on each channel and the load on the channel. Jonas does not assign modems to each channel, but simply prioritizes them, allowing flexibility in usage of the various channels. (See Jonas at column 9, lines 14-17.) This prioritization is based upon a number of

measured parameters for each modem in each channel. (See Jonas at column 9, lines 18-23.)

The Office Action states that “Modems are calibrated via a calibration message constructed at the hub by measuring some parameters of communication bursts between the modem to the hub. The modems rotate in using the available upstream channels so that each available channel is fully calibrated using actual communication bursts...” However, these parameters do not include the actual usage of each channel by each user measured by a time spent in each channel.

Measuring some operational parameters from actual communication bursts is not equivalent to determining the actual usage of each channel by each user. Further, Jonas explicitly states that these parameters are not all obtained through actual communication bursts. Active modems can be calibrated by measuring the parameters of the received data. However, non-active modems will do calibration by polling. (See Jonas at column 9, lines 47-49.)

The invention of Jonas periodically calibrates the channels and in doing so determines a number of upstream operational parameters for each modem in each channel. However, these operational parameters do not include the actual usage of each channel by each individual user, measured in time spent in each channel. These upstream operational parameters include parameters like power, timing, frequency offset, and equalizer coefficients. (See Jonas at column 9, lines 31-33.) Jonas does not disclose, teach, or suggest determining the **actual usage** (in time spent) of each channel by each user.

The upstream operational parameters of Jonas are used to prioritize the channel allocation of the various modems, but Jonas never measures the actual time spent in each channel by each of the users. Prioritizing users to different channels does not guarantee that the users will actually use all (or any) of the time and channels allotted to them. Thus, prioritizing the channel usage is not equivalent to determining the actual usage of each channel by each user, measured by time spent in each channel.

Thus, the combination of Moura and Jonas fails to disclose, teach, or suggest all of the limitations present in claim 1, and so the combination fails to render claim 1 obvious.

Since independent claim 41 contains limitations similar to those of claim 1, the above discussion also applies equally to claim 41. For at least the reasons presented above, the Applicant contends that independent claims 1 and 41 are patentable over Moura in view of Jonas, and such indication is respectfully requested.

Claims 2-20 depend from independent claim 1 and claims 42-60 depend from independent claim 41, thus incorporating the features of their respective independent claims. Thus, the Applicant asserts claims 2-20 and 42-60 are allowable for at least the same reasons as claims 1 and 41, and such indication is respectfully requested.

### **Conclusion**

Based on the above remarks, the Applicant respectfully requests the reversal of the rejection of claims 1-20 and 41-60. Additional reasons in support of patentability exist, some of which have been presented in previous communications, but such reasons are omitted here in the interests of clarity and brevity. The Applicant thus respectfully requests allowance of claims 1-20 and 41-60.

The Applicant believes no fees are due with respect to this filing. However, should the Office determine fees are necessary, the Office is hereby authorized to charge Deposit Account No. 21-0765.

Respectfully submitted,

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